

Consultant  
recommended option

**Interchange Concept Options Comparison**

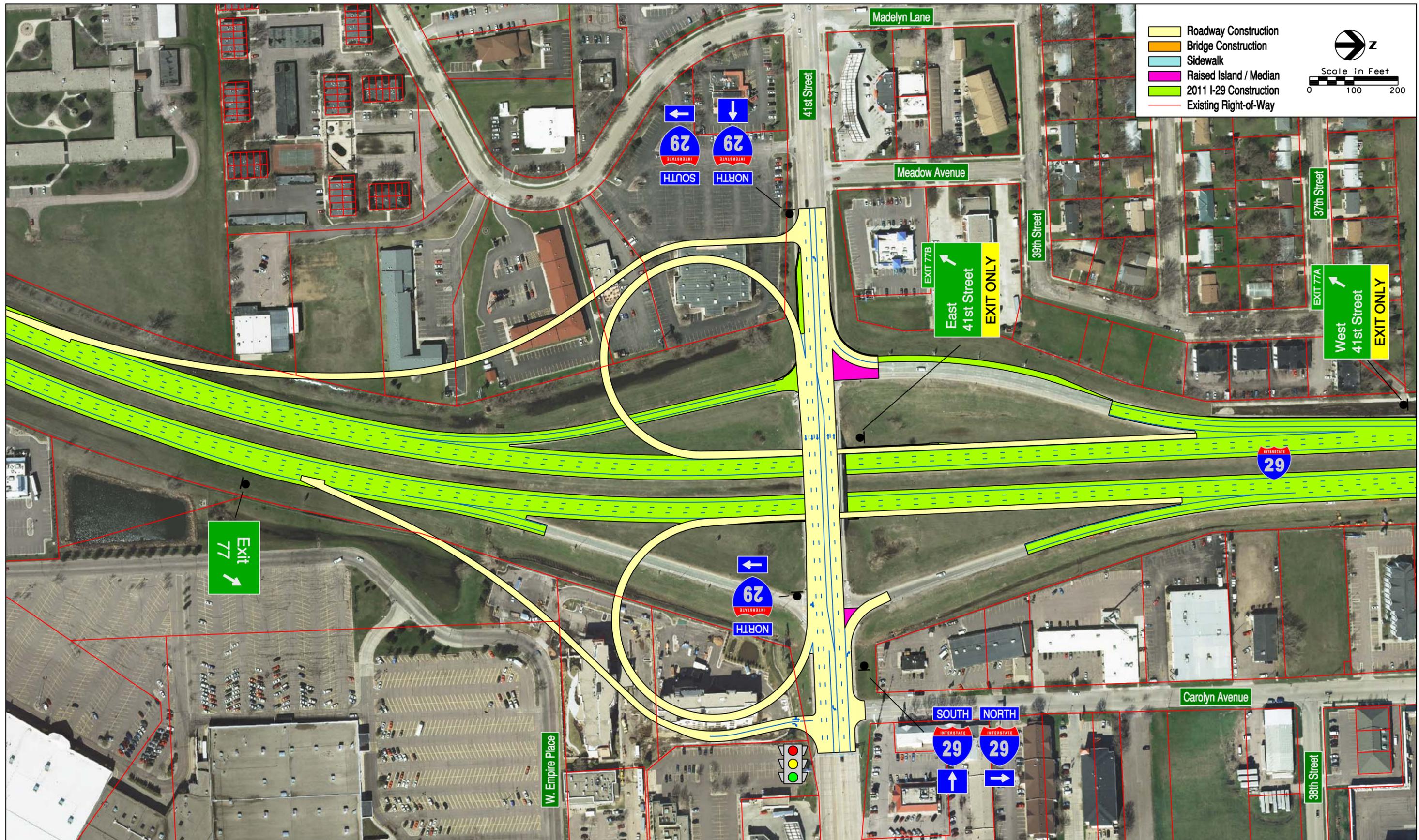
Interchange Type	Partial Cloverleaf	Single Point	Diverging Diamond
Year 2035 Traffic Operations (PM Peak hour)			
Level of Service (LOS)	(1)	D	C
Avg. Delay (seconds)	(1)	37	25 to 30 (2)
Right-of-Way Impacts	Major	Minimal	Minimal
Approximate Construction Cost (Million \$)	(1)	11	5
Ease of Construction	Simple	Complex	Moderate
Traffic impacts during construction	Minor	Major	Moderate
Expected Driver Acceptance	Good	Good	Moderate (3)
Pedestrian Accommodations	Moderate	Moderate	Good

Notes:

- (1) Due to the significant property impacts of the partial cloverleaf interchange, level of service and construction cost were not determined for the partial cloverleaf concept option
- (2) SB ramp intersection = 25 seconds, NB ramp intersection = 30 seconds (VISSIM analysis)
- (3) Adequate driver education at other DDI installations has led to overall good driver acceptance.

Benefits/drawbacks of options as well as basis of Consultant Recommended Option are listed on the project website:

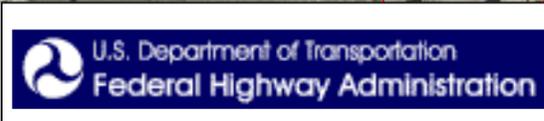
[http://www.sddot.com/pe/projdev/planning\\_ss\\_I29Exit77.asp](http://www.sddot.com/pe/projdev/planning_ss_I29Exit77.asp)



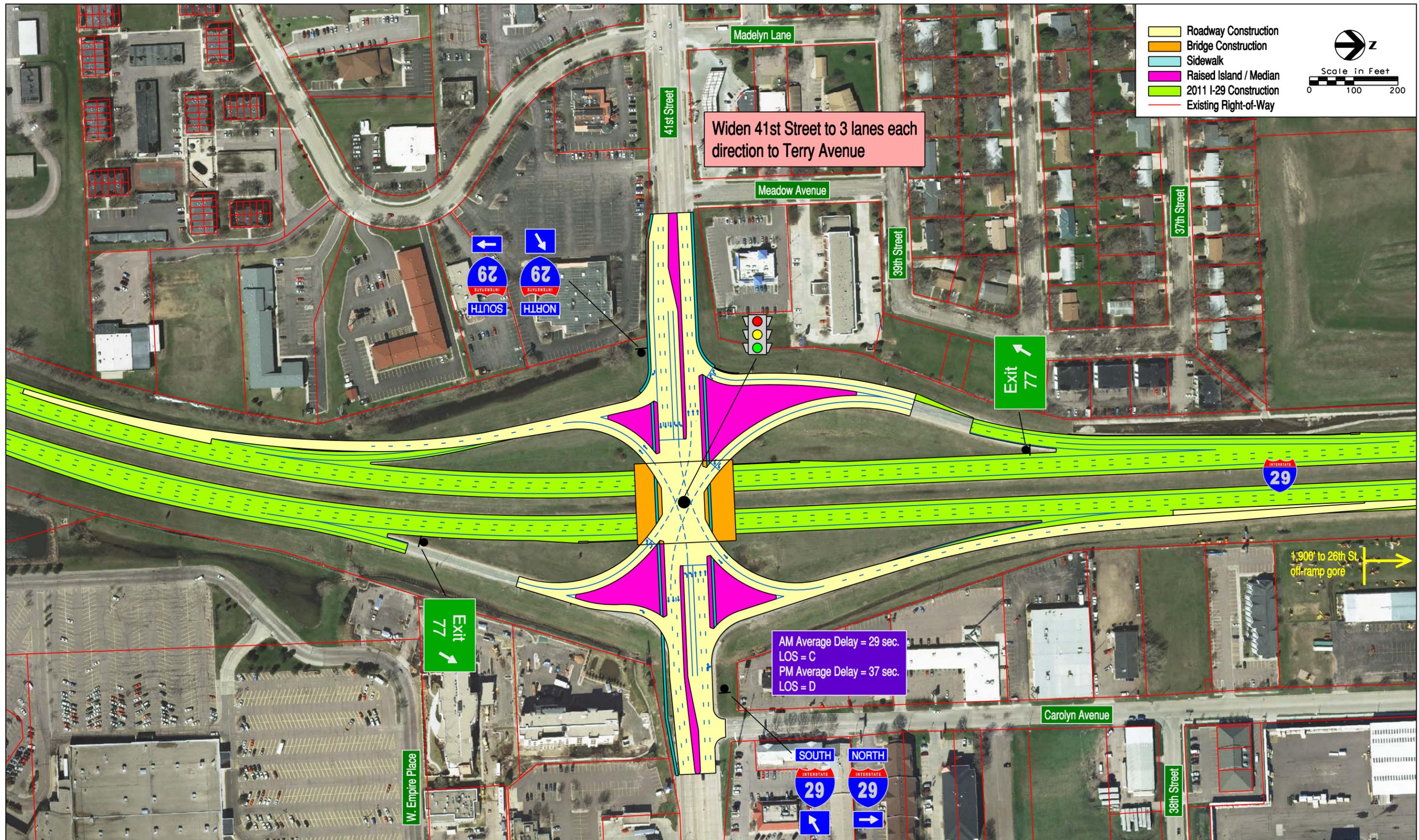
Roadway Construction  
 Bridge Construction  
 Sidewalk  
 Raised Island / Median  
 2011 I-29 Construction  
 Existing Right-of-Way

N  
 Scale in Feet  
 0 100 200

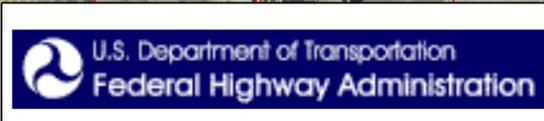
Drawn By: B. Miller  
 Date: 9-21-2011  
 Checked By: J. Unruh  
 Date: 9-21-2011  
 Revisions:



Date of Aerial Photography: 2008



Drawn By: B. Miller  
 Date: 7-29-2011  
 Checked By: J. Unruh  
 Date: 7-29-2011  
 Revisions: 9-9-2011



Single Point Interchange Option

I-29 Exit 77 (41st Street) Crossroad Corridor Study

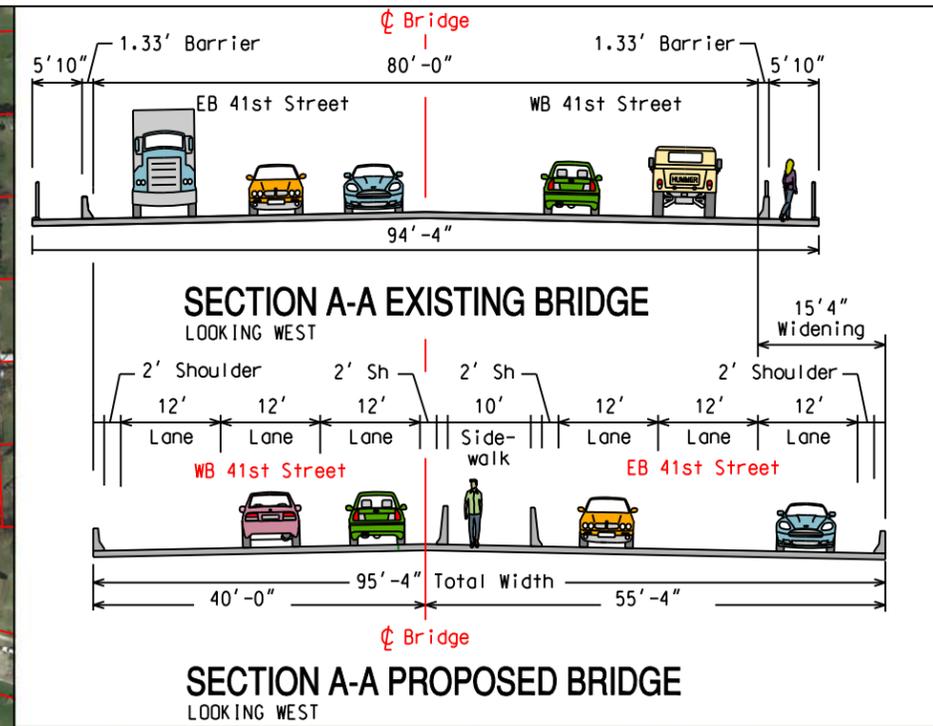
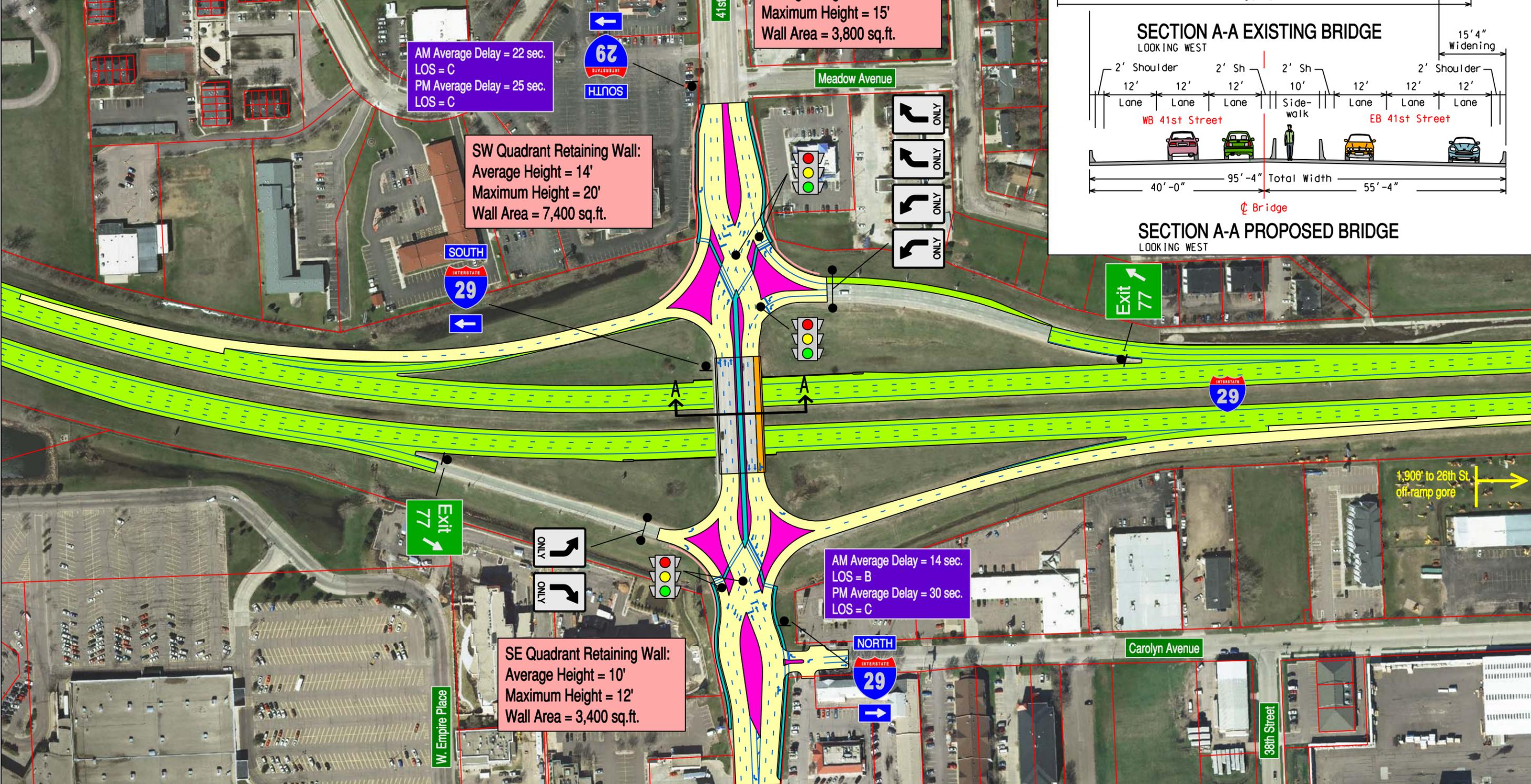
Sioux Falls, SD

Figure 5-2

Date of Aerial Photography: 2008

- Roadway Construction
- Bridge Construction
- Sidewalk
- Raised Island / Median
- 2011 I-29 Construction
- Retaining Wall
- Existing Right-of-Way

Scale in Feet  
0 100 200



Date of Aerial Photography: 2008

Drawn By: B. Miller  
Date: 7-29-2011  
Checked By: J. Unruh  
Date: 7-29-2011  
Revisions: 2-2-2012

**Diverging Diamond Interchange Option**

I-29 Exit 77 (41st Street) Crossroad Corridor Study    Sioux Falls, SD

Figure  
**5-3**